

Vol. 153



July 28 1912. Sine-stone Sines.

about 3 miles N. of W. Cal.

13368 Grass, rocky hillside

13369 Herb, 6-9 in. fl. winged, in grass among stones.

13370 Rubaceous herb 4-8 in. fl. bl.
blue. in grass among stones

13371 As plumbum, on ground in
darker shade, among large rocks

13372 Silicariae vine to 10 ft., orthopan
dark pink, inner perianth blue, with purple
lacinia. On side of rock

13373 Urtica, 6-10 in. small frg. (lost)
in crevices of rocks

13374 Stumb 6-8 ft., fl. bright red

✓ Erythroxylum? among stones

13375 Pelria? herb 3-8 in. infl red-
dish, stem & foliage of trun red
Crevices on rock cliff

13376 Shrub, tree like up to 10 ft.
Bucania? very br. bran. green
among large rocks

- ✓ 13377 "Polypodium." base of tree
 among rocks
- ✓ 13378 Anthonium glossy leaf, inf. 1 m.
 seepage yellow-green spath. purple
 Side of steep cliff
- ✓ 13379 Tadianthus, in shrub. of tree
 among rocks
- ✓ 13380 Fern, Aspidium? light green
 shiny green among rocks
- ✓ 13381 Mikania, comp. vine 6-8 ft
 over bushes, fls white, among rocks
- 13382 Ipomoea, vine 6-8 ft., fls bright red
 over bushes on rocks
- ✓ 13383 Cucurbit, ? vine 8-10 ft fls orange
 colored, over bushes & on rocks
- ✓ 13384 Vine-like shrub fl. yellow, Turner
 fortia? among stones
- ✓ 13385 Urteca, herb to 16 in dark green, in
 crevices of high rocks
- ✓ 13386 Spiny shrub 6-8 ft, avellan. fl.
 black, bright red on rocks
- ✓ 13387 Pilosella, small leaf, side of high
 precipice fls red
- ✓ 13388 Shrub 2 ft, fls white, young foliage
 reddish, Side of high cliff
- ✓ 13389 Herb. 3 ft. tubular fls. bright
 yellow side of high cliff
- ✓ 13390 Small tree, 10-15 ft. Ge " "
 no infl = Solanaceae - ? top 5-10
 high to 12 ft
- ✓ 13391 Epededium, fine all outer pro-
 d. bracts below, mislabelled Spotted adder's
 pim. on Drago 3 or 13390
- ✓ 13392 Herb. Urteacar? 4-6 in
 crevices of rock
- ✓ 13393 Hairy herb to 18 in fls yellow
 crevices of rocks
- ✓ 13394 Vine - woody, many feet
 thick among rocks
- ✓ 13395 Herb? 3-4 ft. fls white
 Boraginaceae among rocks
- ✓ 13396 Selaginella - fruit
 creeping over dry rocks. cutting
- ✓ 13397 Harissa? creeping closer on
 high rocks. fruit yellow
- July 29 to cañon passing of Rio
 Cuyaguateja, under mouth the
 Sierra - two canes separated by a
 completely naked valley about one
 mile long. = Potrerito
- ✓ 13398 Vine 8-10 ft. fruit orange-red fls white
 Solanaceae, thickets
- ✓ 13399 Urteacar, vine like 3-5 ft over
 rocks in shade fls. white

- ✓ 13404 Herb, cervices of shaded & dry
 rock crevices, corolla abd.
 13405 Herb shrub 6 ft, cervices of
 wells, fl. white fl. yellow
 13406 Aspidium, finely divided foliage
 shaded rocks in valley
 ✓ 13407 "Polypodium" entire - shaded
 rocks in valley
 ✓ 13408 7-8 ft. like or shrub like 3-4 ft,
 fl. white, shaded base of rocks in valley
about mouth of cave
 ✓ 13409 Herb, herb 4-5 ft, corolla irregular, yel-
 low, among rocks at cave
 ✓ 13410 Shrub to 10 ft, fruit dark red
 among rocks at cave
 ✓ 13411 Adiantum - triangular 5 segments
 shaded rocks at cave
 ✓ 13412 Crotos, infl. red, 6-8 in, ^{dry} cervices of
 rock in shade, mouth of cave
 ✓ 13413 Malpighia, pendulous shrub 6-8 ft
 side of cliff by cave fl. white
 ✓ 13414 Shrub 3 ft, pendulous on precipice
 fl. fragrant, white mouth of cave
 ✓ 13415 Capparis, pendulous shrub 6-8 ft
 fl. white, mouth of cave
 ✓ 13416 Psychotria soft shrub 6-8 ft
 fl. white, fl. numerous ^{near} mouth of cave
 ✓ 13417 Fern, among dry stones, near
 mouth of cave
 ✓ 13418 Psychotria 3 ft, herbaceous, fl.
 white, very sweet, near mouth of cave
 southern mouth of cave
 ✓ 13419 apoc. vine soft, fl. white fading
 to yellow, thick so, mouth of cave
 ✓ 13420 Tree to 30 ft, fruit blue when
 fully ripe
 ✓ 13421 Erythroxylon, tree 15 ft, esp. in
 fruit, red, very sweet, so mouth of cave
 ✓ 13422 Vine, hairy, to 6 ft stinging
 very sweet, so of cave
 valley, "Portobelo" between two
 caves, cut by railroad by high, proper
 dike, Simas.

- 13423 Shrub 2 ft, on dry rocks along Rio
 Cuyacuataje, fls. white
- 13424 Tree, 20 ft, np, pink red
 along river
- 13425 Tree, shaded rocks, along river
Phryopteris
- 13426 Small triangular tree, rocks at
 mouth of 2nd cave
- 13427 Adiantum, fragrant near mouth of
 2nd cave
- 13428 Shrub, 3-5 ft, pendant on precipice
 mouth of 2nd cave fls. white
- 13429 Adiantum elongated fronds
 moist rocks, mouth of 2nd cave
- 13430 Shrub 2-4 ft, side of precipice
 mouth of 2nd cave, greenish fls.
 bright red
- 13431 Soft, Shrub 3-5 ft, fls. white
 thickets near mouth of 2nd cave
- 13432 Adiantum, hard edge, little
 divided, shade of thickets near 2nd cave
- July 31 'Sierra' at 'town', rising to
 about 6000 ft alt, almost no soil, all
 dry rocks
- 13433 Shrub ⁶⁴ 2 ft, side of cliff fl. bright
 orange red; Rubiaceae
- 13434 Spine 3 ft. alt. sp., in open
 dry, sandy soil
- 13435 Tree, coarse, in patches of rd
 soil, among shaded rocks
- 13436 Dicranoceras vine, many
 perls. flowers over bushes
- 13437 Small tree to 15 ft
 fl. capsule rocky cliff
- 13438 Tree, triangular, shaded
 rocks
- 13439 Selaginella creeping in rd
 soil, pockets of shaded rocks
- 13440 Borag. vine in water with a
 black eye (seed) over bushes very thick
- 13441 Apoc. herb. 3-4 ft, top of cliff
 fl. white
- 13442 Plumbaria, tree to 20 ft.
 fragrant fls. white high dry rocks
- 13443 Santolina, shrub 2-3 ft, around
 fls. purple, top of highest rocks
- 13444 Aristolochia vine, fls. gran-
 ite yellow, spotted with brown high dry rocks
- 13445 Small tree 12 ft.
 dry high rocks
- 13446 Xanthoxylum, tree or shrub to
 15 ft infl. white, highest rocks

- ✓ 13447 Shrub 7 ft. to 13 ft., small trifoliate
 bracts, white, dry limestone
 ✓ 13448 Tree to 20 ft. fl. white
 ✓ Cordia. dry rocks
 ✓ 13449 Tree to 25 ft Citharexylon
 high dry rocks
 ✓ 13450 Acalypha vim 10-20 ft. over
 rocks. closed fls white
 ✓ 13451 Spiny leaf shrub 10 ft. fl. red
 high dry rocks.
 ✓ 13452 Small tree 12 ft.
 ✓ fl. lobed high dry rocks
 ✓ 13453 Small tree to 10 ft. fl. globosa
 high dry rocks
 ✓ 13454 Tree to 18 ft. fl. oblong
 fleshy white. high dry rocks
 ✓ 13455 Spiny shrub 4-6 ft. small
 elongated capsule & seeds. high dry rocks
 ✓ 13456 Szelepi. Vines, woody, many foot
 on rock cliff fl 4x 3/4 in. carmine
 ✓ 13457 Epidendrum cochlearium?
 flower with purple yellow, inner purple
 ✓ 13458 Adiantum, cam like more
 in high cliffs.
 ✓ 13459 Fleshy vine, creeping over
 top of high dry rocks
- ✓ 13460 Shrub 3 ft. fl. white. among
 shaded rocks - side of cliff
 ✓ 13461 Adiantum manne pinnatum
 among shaded rocks
 ✓ 13462 Shrub to 8 ft. Psychotria?
 among shaded rocks
 ✓ 13463 Coarctatum 2 ft.
 shaded rocks
 ✓ 13464 Croton 18 to 24 in. fl. white
 field - base of cliff Herba?
 ✓ 13465 Cissus, run several feet
 fls yellowish, base of cliff
Aug. 2nd Higher Sierra S. W.
 ✓ of "town"
 ✓ 13466 Vine 6 ft. fl. fragrant white,
 fruit globosa, trilobata, white, slender
 ✓ conisperme among rocks
 ✓ 13467 Syzygium run 4-5 ft
 hairy, among rocks
 ✓ 13468 Woody Vine 4-6 ft. dry rocks
 fl dark reddish purple Bignonia
 ✓ 13469 Tree to 15 ft. Exostema fls
 white capsular brown, among dry rocks
 ✓ 13470 Woody vine, to 10 ft. fl. white
 thick yellow Bignonia, among rocks
 ✓ 13471 Tree to 20 ft. fleshy fl. black
 among dry rocks

- 13472 Tree to 30 ft orange red
 among rocks
- ✓ 13473 *Epidendrum* on dry rocks, tree
 among rocks ^{with few small brown flowers}, many yellow
 flowers, white & purple
- ✓ 13474 *Spathularia*, large dry rocks, dead tree
 to 30 ft. with remains of palm fronds, ⁱⁿ ^{dead}
^{tree} ^{fronds} ^{of} ^{old} ^{dead} ^{tree}
- ✓ 13475 Straggling tree to 12 ft, ple brown
 among dry rocks. Anacardie
- ✓ 13476 *Bromeliad*, top of highest rocks
 incl. to 5 ft, lvs light green, giving them
 aspect to little water run from distance
 base full of water and used when
 thirsty, 1 plant gentle about 1 part
- ✓ 13477 Strict shrub 10 ft, fruit 2 in in dry
 brown. Grumia? dry rocks, fl long pale
- ✓ 13478 Tree to 25 ft fl white
 dry rocks =
- ✓ 13479 Tree to 35 ft fl white Grumia
 damp places among rocks
- ✓ 13480 Shrub or tree to 10 ft grayish
 fls white among dry rocks
- ✓ 13481 Woody vine 30 ft x 1/2 in fl. bright
 blue, glaucous, bitter, Anacardie
- ✓ 13482 "Cordia" Bush to 10 ft
 orange red, fls white, on rocks
- ✓ 13483 Trees 7 m to 15 ft fl
 dark yellow among rocks
- ✓ 13484 First vine 5 ft, trifoliate,
 yellow - Vitaceae, among rocks
- ✓ 13485 Tree 15 ft. fl. 3 lobed
 among dry rocks
- ✓ 13486 Woody vine to 30 ft, fls
 blue orv. bluish among rocks
- ✓ 13487 *Bromeliad* incl rock
 or rocks
- ✓ 13488 Asclep. Vine 15 ft. small
 fls yellow, on bushes among rocks
- ✓ 13489 Anacardie - Vines to 10 ft
 incl. dried. green, on trees among rocks
- ✓ 13490 Hohenbergia? on rocks & trees
 about 1500 ft all to bluish gray
- ✓ 13491 Fleathy vine 15 ft. ripe fl. black
 fls yellow, on trees among rocks
- ✓ 13492 *Bromeliad*. 7 in narrow fol.
 bl. green, on trees among rocks
- ✓ 13493 Weak shrub to 6 ft. fl. fleathly
 white among rocks
- ✓ 13494 *Cordia?* 7 m 15 ft fl white
 among rocks
- ✓ 13495 Shrub 6 ft fruit very abundant
 among rocks
- ✓ 13496 *Bromeliad* fol. bluish ^{rocks}
 red, corolla blue on trees among

- 13497 Orchid, far little glaucous green
very downy, or tufted among rocks
at base of large green spadix tree
- 13498 Orchid, fls. at base of tree, pale
yellowish, on tree trunk among rocks
- 13499 Woody grass to S.H. among rocks
in pasture
- Aug 4 Highest Sierra, S.W. of
"town" (Semidoro)
- 13500 Santana rocks at base of
Sierra fls purple
- 13501 Polypodium, autospadix, base
of Royal Palm, foot of cliff
- 13502 Cyperacean, shaded base of
rocks
- 13503 Passiflora, herbaceous vine 6-8 ft.
globular pink black, climbing over rocks
- 13504 Grass, broad bray. fl. sticky
in shade among rocks
- 13505 Creeping grass, shade
among rocks
- 13506 Asclep., vine woody, many fls.,
fl. white, thickets among rocks
- 13507 Trema, spreading tree to 30 ft
largest tree on Sierra, among rocks
- 13508 Asclep. Vine, small fls. yellow
on bushes among rocks
- 13509 Passiflora, fls. yellow
pink, blue-black, or rocks
- 13510 Shrub to 10 ft., fls. blue
top of flat rocks
- 13511 Smilax woody vine, over
brushes and rocks
- 13512 Silicaceous vine to 10 ft. capsule
greenish. among rocks
- 13513 Shrub, 10 ft. fls. yellow
flabby, = 13510 top of rock
- 13514 Comp. hard bush 4-5 ft.
fl. white light rocks
- 13515 Small tree 12 ft
capsule 3-colored, among rocks
- 13516 Capparis, bushy tree to 15 ft
top of high cliff fls. light brown
- 13517 Shrub, each 4-6 ft. fl. white
top of dry rock
- 13518 Vine 10-12 ft. top of dry rocks
fls. blue, ligustrinum
- 13519 Asclep. Vine 8 ft. glossy
bray. milky - fls. white on rocks
- 13520 Small tree 15 ft. edge of high
cliff, Guillaidea
- 13521 Herbs to 6 ft. woolly white bray
grassy top of cliff

- 13522 Grass. crown of high cliff
- 13523 Shrub to 10 ft. spiny, fls yellow edge of high cliff
- 13524 *Mutisia*, comp. vnum. & sp. fls pink, over bushes top of Sienna
- 13525 *Leioscore*. vnum & fl triangular, fruit green, over rock cliff
- 13526 Shrub to 10 ft. x 1 1/2 in fls. blue among rocks.
- 13527 *Stigmatoptygium* yellow top of cliff
- 13528 *Broadburya* fls. blue over bushes among rocks
- 13529 Grass
✓ Top of highest Sienna
- 13530 Tree 15 ft.
✓ top of highest cliff
- 13531 Grass
up of highest cliff
- 13532 Shrub to 5 ft. woolly under-
neath fls pink up of highest cliff
- Aug 6 Sierras s.w. of "town"
with Brother Siron
- 13533 5 1/2 ft., base of Sienna rock
102. broad fls.
- 13534 *Scleria* 2 ft. tall, between
limestone rocks.
- 13535 Saw grass
base of Sienna rock
- 13536 Tree, shade base of limestone rocks
- 13537 Dog, Tree 20 ft. dry
edge of rock cliff
- 13538 Husk 1 1/2 in fls. blue
base of limestone rock
- 13539 *Paspalum* hairy straw
2 ft. base of Sienna rock
- 13540 *Psychotria* 4 ft. fls. whitish
among limestone rocks
- 13541 Grass, 2 ft. *Panicum*?
among moist limestone rocks
- 13542 *Pilosella* 2-3 in on face of
limestone cliff
- 13543 *Acliaanthus* shade of
Sienna rock thickets
- 13544 Broad branched grass
shade of limestone rock thickets
- 13545 *Zingiberaceae* herb 6-8 ft.
H stem 2 ft. from root, cavelly blue
leaves over the rock on rd.

- 13546 *Arenaria*, 2 ft, in black soil
 among shaded limestone rocks, steep side.
 pink-yellow. annual
- 13547 *Hypolegium*, serrated
 on limestone rock in shade of *Juglans*
- 13548 *Juglans*. Tree 3 ft in diam
 straight, 60 ft high, among limestone
- 13549 *Piper* shrub 5 ft
 among limestone rocks
- 13550 *Glycine* shrub 4 ft
 shaded limestone rocks
- 13551 *Ficus*, tree 25 ft
 among limestone rocks.
- 13552 *Polyodium*, entire plant
 shrub, shaded limestone rock
- 13553 *Mesobryophyllum*? under
 such of overhanging rock
- Aug 7 Arroyo San Pedro
 Siliceous formation, along
 stream, wet bottom soil.
- ✓ 13554 *Melastom*, shrub, 5 ft
 fls pink, moist soil.
- 13555 *Silene* 2 ft
 moist thicket
- ✓ 13556 *Melastom*, herb 2 ft, fls blue
 - shiny. moist thicket
- 13557 *Leiothrix* fls. pink
 sandy soil
- ✓ 13558 *Thlaspi* 6 ft, fls. blue
 sandy soil
- ✓ 13559 *Tellima* - pink & white
 sandy, basic
- ✓ 13560 *Trifoliate vine - Cirsus?* fls. yellow &
 white - over bushes in thicket
- ✓ 13561 *Melastom*, soft shrub? 3-4 ft
 young greenish hairy fls. blue-black thickets
- ✓ 13562 Creeping grass, edge of thicket
 damp.
- ✓ 13563 Firm, upright vine green
 thickets or banks.
- ✓ 13564 Woody creeping grass 4-6 ft
 moist thicket
- ✓ 13565 *Melastom*, shrub 4 ft, young &
 yellow hairy fls. clusters elongated blue
 berries
- ✓ 13566 *Alamanda* waxy vine, 5 ft
 fls. yellow. Naturalized introduced
- ✓ 13567 Herb? 18 in. fls. blue
 dryish hillside
- ✓ 13568 Rubaceous herb creeping.
 flowers dryish hillside
- ✓ 13569 Herb 1 ft. fls. yellow *Lagunum*
 dryish hillside

- 13570 "Psychotria" de Reiche, Shrub 1-3 ft
 with yellowish, rounded, dry, leafless
 13571 Forest from dry steep hillside
 climbing 4-6 ft
 13572 Brownea L., "bulbaceous"
 infl red on bush, dry bank
 13573 Shrub shrub 5 ft.
 dry bank
 13574 Shrub, slender to 7-8 ft fl. bluish
 moist hillside
 ✓
 13575 Psychotria? shrub 6 ft.
 fl. yellowish moist hillside
 ✓
 13576 Herb. Indigo? root bright red
 fl. white yellow center, moist hillside and
 fl. yellow center, moist of arroyo cliffs
 ✓
 13577 Shrub 4-5 ft Rubiaceae, corolla
 yellow base red, moist bank
 ✓
 13578 Psychotria? 5 ft. fl. whitish
 near water
 ✓
 13579 Roridellaria? Shrub 1-3 ft
 fl. orange red, in sand on well water
 ✓
 13580 Grass on steep bank
 near water
 ✓
 13581 Soft Shrub 4-5 ft. near bank
 fl. red. fl. sparsely twisted
 ✓
 13582 Grass
 strip bank
- 13583 Filmy fern on sand
 near water
 ✓
 13584 Phyllanthus tropic; herb
 1 ft. wells near water
 ✓
 13585 Andromeda Shrub 3 ft
 fl. white, rocks near water
 ✓
 13586 Eriogonum? Ex radical scape 3-4
 in flower & fruit, rocks by water
 ✓
 13587 Phyllanthus 3-4 in dry well
 above water
 ✓
 13588 Soft shrub fls bluish, red, &
 of water on rock
 ✓
 13589 Cyperus on rock near
 water
 ✓
 13590 Eugenia Shrub to 10 ft. white
 flowers. fl. = 13590 ~~be~~ bank
 of arroyo
 ✓
 13591 Tabernanthea Shrub to 12 ft.
 fl. green. seeds red. bank of arroyo
 ✓
 13592 Cereus, herb 6 ft.
 fl. yellow thicket
 ✓
 13593 Shrub 5 ft. fl. pink fl red
 damp thicket
 ✓
 13594 Shrub 4 ft. Rubiaceae
 fl. white. damp thicket.
 ✓
 13595 Asclepias 10 ft
 fl. 6 in x 2 in damp thicket

- 13596 ✓ Tree rose 5' tall shrub 10 ft
 fls white, thicks
 13597 ✓ Strict shrub 6 ft.
 fls bright red, thicks
 13598 ✓ Tree 15 ft.
 fls purple along water
 13599 ✓ Shrub 3-4 ft., caper like leaves
 rocks at edge of water
 13600 ✓ Shrub 4 ft., exotica longipetiolate
 fls white & pink, edge of water or sea
 13601 ✓ Low shrub (*Gesneriacan*) 1 ft.
 fls bl. yellow rocks at water edge
 13602 ✓ Shrub 3-4 ft., fls orange yellow
 rocks at water's edge Runduukku
 13603 ✓ *Cypraeaean* covers of rocks in
 water
 13604 Fern, shaded ravine
 13605 Puspalum grass on
 hillside
 13606 Cypraeaean water crevices
 hillside
 13607 Callicarpa? shrub 4 ft
 arilly pub. bl. blue hillside
 13608 Rubus some? herb 1/2 ft. black
 fls white dry hillside

- 13609 ✓ Grace hillside
 13610 ✓ Cephaelis plant
 hillside
 13611 ✓ Grass. silty soil
 hillside
 13612 ✓ Cyperus 10 in
 hillside
 13613 Andropogon - grass
 hillside
 13614 ✓ Syngonium
 hillside
 13615 ✓ Paurium
 dry hillside
 13616 ✓ Hyptisicum 2 ft. fls yellow
 hillside
 13617 ✓ Andropogon - grass -
 hillside
 13618 ✓ Tree from bush 3-5 ft. pounds
 3-4 ft. moist ravine
 13619 ✓ Burdock. shrub 3-4 ft
 moist thickets
 13620 ✓ Blechnum thin fronds
 soft rocks in thickets
 13621 ✓ Climbing fern prickly
 moist thickets

- 13622 *Forsiera* firs. 1- $\frac{1}{2}$ ft
 moist thicket
- 13623 *Melastom*, soft shrub 3 ft
 moist thicket
- 13624 *Blechnum*? upright sedge
 ✓ moist hillside
- 13625 *Hypnum* 3 ft. stricts into
 large tuves. moist hillside
- 13626 dry *espodium*
 moist hillside
- 13627 *Cyrilla*? shrub to 5 ft.
 moist hillside
- 13628 *Hypnum* 2 $\frac{1}{2}$ ft
 moist hillside
- 13629 *Dioscorea*? vine 4 ft
 moist hillside
- 13630 shrub to 3 ft. fragrant fls
 white dry hillside
- 13631 *Melastom*, shrub 3 ft
 fl. blue dry hillside
- 13632 Shrub 4 ft. evergreen
 dry hillside
- Aug 8 *Potentilla* small
 yellow flowers, scattered through carna
 Río C
-) flowers white
 through carna and auto through

- another - ally about 13 in
 fern several eaten, remaining it - with
 Brother Ervin (13633 to 13640 inc. Noth; 144)
- 13633 *Asclepi*. vine 10 ft. fls cream
 white part 1 $\frac{1}{2}$ to 6 in. Corolla long and thick
- 13634 *Trodantvium*, 4 ft. white fls fragrant
 on strigellate roof of cane
- 13635 Grass, creeping? in sandy soil
 near of cane
- 13636 *Cyperus*. sandy soil n. of cane
- 13637 Grass, creeping, near of cane
 in sandy soil
- 13638 *Paspalum*, in sandy soil
 n. of cane
- 13639 *Cyperus* sandy soil
 near cane
- 13640 *Santana* shrub 3 ft. long slender
 fls orange red near of cane
 In valley, base of sierra
 or along river bank
- 13641 *Oxalis* in sand & steep eroded
 Río, fls yellow
- 13642 *Cyperus* 6 in do, do
- 13643 *Urtica*? 1 ft. in damp
 shades

- 13644 ✓ Small, hummocky fern
 Slender Cinn. rock Cr. 2400 ft. - na
 13645 ✓ Triangular fern. do do
 13646 ✓ Selaginella do do
 13647 ✓ Upright fern do do
 13648 ✓ Small branched fern,
 moist shade
 13649 ✓ Upright fern
 various sh. & s.
 13650 ✓ Herb 2 1/2 ft
 near river bank
 13651 ✓ Sippia, Cañon of river
 13652 ✓ Slender shrub 4 ft.,
 fl white thicker
 13653 ✓ Small fern
 slightly thicker
 13654 ✓ Fern - of silver fern & old
 slightly bank
 13655 ✓ Cyperus. thin cyl.
 in sand near Rio
 13656 ✓ Cyperus, large
 do do
- 13657 ✓ " " , The inf.
 do do
 13658 ✓ Cyperus. slender cyl.
 do do
 13659 ✓ Slender, Psilotaria? 3 ft
 fl white fl. black River bank
 13660 ✓ Small tree 2 1/2 ft
 fl black globose River bank
 13661 ✓ " " fern.
 near bank of River
 13662 ✓ Shrub 3-6 ft. Ericaceous.
 3-6' h. Rocky, river bank
 13663 ✓ Rondelia? 1-3 ft. shrub
 fl orange. rocky bank near Rio
 13664 ✓ Shrub 1-1 1/2 ft. fl. fr. (red)
 rocky bank of Rio
 13665 ✓ Rondelia? 3-4 ft. fl red
 near base of base of river
 13666 ✓ Silicaria 6 in fl. pink
 sand among rocks by Rio
 13667 ✓ Comp. seaper 3 in fl. white
 sand among rocks by Rio
 13668 ✓ Selaginella in cave
 fol. silvery green
 13669 ✓ Fern in cave

- 13670 Grass. in cane
- Aug 9 Arroyo Sumidero to
m 2000. S tip of Cerro del
Solon S location (about 1000 ft alt.)
Siliceous formation - with Butter
Grass.
- 13671 Rhiz. 3-4 ft.
dry hillside
- 13672 Shrub 1-3 ft fls white
= dry hillside
- ✓ 13673 Nurlastour 2-3 ft fls white
fl bluish-black dry hillside
- 13674 Sagt 1 1/2 ft fls yellow
dry hillside
- 13675 Nurlastour. 3 ft. fls white
dry hillside
- 13676 Oak 6-15 ft.
dry hillside
- 13677 Paspalum Cow grass
dry hillside
- 13678 Cyperus
dry hillside
- 13679 Ericaceous Shrub 3-5 ft
fls white dry hillside
- 13680 Eugenia 1 1/2 ft jec white
dry hillside
- ✓ 13681 Grass . dry hillside
- 13682 Parinum dry hillside
- ✓ 13683 Grass 1 1/2 in
dry hillside
- 13684 Climber 5 ft fls white
by stream
- ✓ 13685 Clusia : straggling shrub 8-10 ft
small fls pink rocks by stream
- 13686 Vine, woody 10 ft. fl yellow
dry edge of stream
- ✓ 13687 Psychotria 6 ft. white
near stream
- ✓ 13688 Cyperus , small.
by stream
- ✓ 13689 Big fern white flower
by stream
- ✓ 13690 Moricandia - vine 10 ft.
woody vine
- ✓ 13691 Big Bean vine 3-4 ft fls. blue
seed black ravine
- ✓ 13692 Psychotria 4 ft. white
ravine

- 1368 ✓ Upright fern 3 ft
 ravine
- 1369 ✓ Adiantum capillus
 in shade ravine
- 1370 ✓ Fern aspidium?
 in shade ravine
- 1371 ✓ Tall fern
 ravine
- 1372 ✓ Walnut tree top blue vsp.
 2 ft diameter lvs only ravine
- 1373 ✓ Thin compound fern
 damp shade, ravine
- 1374 Polyodium falcatum?
 on rock - ravine
- 1375 ✓ Creeping fern
 bank of ravine
- 1376 ✓ Peperomia small crag
 on log across ravine
- 1377 ✓ Polyodium aureum?
 on log across ravine
- 1378 ✓ Small tree 15 ft
- 1379 ✓ Samoan fls white Ravine
- 1380 ✓ Much branched fern
 ravine
- 1381 ✓ Asplenium art near at
 falls of Angra sunnyside

- 1375 ✓ Pilos small green foliage
 with leaf do do
- 1376 ✓ Bromeliad. rocks
 above the falls
- 1377 ✓ Zingiberaceous leafy fol.
 reddish, infl. red ravine above falls
- 1378 ✓ Sudwigin 9 ft. in ravine
 above falls fls yellow
- 1379 ✓ Cyperacean white crest
 grassy dry hillside
- 1380 ✓ Apose vein 2 ft.
 yellow grassy hillside
- 1381 ✓ Zamia
 grassy hillside
- 1382 ✓ Habenaria, greenish white fls
 grassy hillside
- 1383 ✓ Grass
 grassy hillside
- 1384 ✓ Grass setaria?
 top of Cusickia
- 1385 ✓ Grass agropyrum
 top of Cusickia
- 1386 ✓ Habenaria greenish white
 top long 4 = 13714 top of Cusickia

- 13719 Tall grass. 2 $\frac{1}{2}$ ft
 Top of cushion
- 13720 Grass 16 in
 Top of cushion
- 13721 Palm. 12 ft. in clumps
 East side of top of cushion
- 13722 Grass thin brush
 Top of cushion
- 13723 Rubiaceous herb 1 ft white
 Top of cushion
- 13724 Grass creeping
 Road to Samadra
- 13725 Grass
 Road to Samadra
- Aug 13 Sienna at Sumidero about
 500 ft. all. on rocky cliffs
- 13726 Bourreria de Sienna, Spathelia
 to 20 ft. fls pink. dries after pruning
 as proven by many dead with pink stalks
 still persisting, on very exposed cliff
- 13727 Palma de Sienna Gusseia
 to 30 ft 3-to 5 bracts at top 45 ft long
 up to 18 in to 2 ft long, pinkish yellow
 to orange. rocky places
- 13728 Crotalaria? shrub 2 ft. fm
 among limestone
- 13729 Viciaeae, 2 mm
 black. among rocks
- 13730 ~~Brassicaceae~~ implex fle.
 blue face of cliff
- 13731 Jaguarina slender 2-5 ft. fls.
 yellow, green! dry limestone
- 13732 Brasicaceae implex yellow
 on dry rocks
- Aug 15 Caliente at the
 head of Arroyo Caliente
 small and wetter stream dry
- 13733 + m. whitish wash in
 on slopes in can
- 13734 Tree 35 ft. Croton? fl yellow
 rocky soil base of Sierra
- 13735 Portulaca? m. Lush 1 ft in
 rocky soil at base of Sierra
- 13736 Syngonium Gary - to 3 ft
 thick main trail
- 13737 Creeping herb, earth bank
 by trail fls. yellow
- 13738 Herb 2 ft yellow, sticky
 leaves? side of trail
- 13739 Crotalaria slender to 12 ft
 fl. brown bitter, very thick

- Aug 17 La Sierra, dry rocky hills
 at 750 ft. alt., left side of valley. ✓ 13751 Buissera, tree to 20 ft.
 smooth reddish, aromatic, dry
- ✓ 13740 soft triangular frn.
 moist limestone
- ✓ 13741 Shrub 12 ft. fl. axillary green
 limestone thickets
- ✓ 13742 Shrub 10 ft. axilla fls
 white limestone thickets
- ✓ 13743 Mistletoe on 13742
 among dry rocks
- ✓ 13744 Tree to 25 ft. Saguinus
 among dry rocks
- ✓ 13745 Herb 3 ft.
 moist rocks
- ✓ 13746 Adiantum. yellowish foliage
 near spring
- ✓ 13747 Agave, fol 18 in. bluish, scape
 to 15 ft. scutellum viviparus
- ✓ 13748 Brago spreading trunk
 35 ft, flowers pink, light green
- ✓ 13749 Guttarolia tree 20 ft
 high dry rocks
- ✓ 13750 Cycad. trunk to 20 ft 1/4
 at base about 150 cm. dry
 rocks at 650 alt
- ✓ 13750a trunk broken off at 12 ft and
- ✓ 13752 Palm. tree to 20 ft. pink
 fruit & leaf base dry rocks
- ✓ 13753 Bromelias. for red pe
 tals. face of rock walls esp
 often growing on old leafy
- ✓ 13754 Caetus, L. strobilus? empus
 on high dry exposed rocks, young
 growth reddish hairs, jointed ramets
 long & short, small old plants seen
- ✓ 13755 Bromelias
 dry rocks
- ✓ 13756 Acanthus tree
 planula inside, red at base
 at crossing of Rio Cuervo Tigris
 in dry limestone
- ✓ 13757 Polanogoton in swift water
- ✓ 13758 Eustoma longiflora, fls white
 & purple, stem 3 ft
- ✓ 13759 Fern. Edge of water
- ✓ 13760 Roridaria stem 3 ft
 fl red

- Aug 18 Sierra Caliente, 1 of
July, 3 alt. 7950 ft. alt. 11
pines
- ✓ 13761 Vine 10 ft. tuberous
succulent dry rocks
- ✓ 13762 Fern, triangular
leathery moist soil between
rocks
- ✓ 13763 S. - 10 ft. 12 ft.
dry rocks
- ✓ 13764 Shrub 6 ft.
dry rocks.
- ✓ 13765 Bromelad infl. small yellow
fern of dry rocks.
- ✓ 13766 Fern,
fern of dry rocks
- ✓ 13767 Polypodium incanum
dry tree
- ✓ 13768 Shrub 6 ft., pink flowers
white dry rocks
- ✓ 13769 Cordia p. fls white
shrub 4 ft. dry rocks
- ✓ 13770 Shrub 2 ft. fls white fl. black
urastom? dry cliff
- ✓ 13771 Vine, Vitacean 6-8 ft
fl. black, pinkish red dry rock
- ✓ 13772 Stem 6 ft. axill. fls
dry rocks
- ✓ 13773 Shrub 6 ft. fls white
fl. black
by caatinga way up
- ✓ 13774 Bromelad. narrow top
infl red fls, green, purple
- ✓ 13775 Epoostrada 7 m 20 ft
fragrant fls white dry rocks
- ✓ 13776 Bromelad. crystalline
dry bushes on dry rocks
- ✓ 13777 Cratone 4-5 ft. fls silv.
white dry rocks
- ✓ 13778 Ceropegium on rock
near top of Sierra
- ✓ 13779 Tillandsia gray fls blue
on bushes nec. tip of Sierra
- ✓ 13780 Shrub 10 ft. axill fls yellow
top of Sierra 950 ft.
- ✓ 13781 Comp, Shrub, thick, like E.
Bistriata shrub 20 ft x 4 in. w. of S.
- ✓ 13782 Shrub to 10 ft. axill fls
yellow top of Sierra
- ✓ 13783 Xanthoxylum, shrub 8 ft
fl. green. top of highest part

- 13784 *Pepperomia* ~~andreae~~
 nodding pedunculate tip of
 Sierra.
- Aug 20 Sierra Maravillas
 ✓ Limestone Sierra 1600 ft. s. of San Pedro
 13785 *Polygonum*, bush to 5 ft. green in
 thick in water - long petioles fl. white
- 13786 Firm, return pond, small
 limestone rocks
- 13787 *Rhaipodalis*
 on limestone
- 13788 *Psychotria* sierra 900 ft yellow
 limestone thickets
- 13789 Firm, ~~dark~~^{damp} asperule
~~limestone~~ limestone by cañon
- 13790 *Pepperomia*, dark green, fol.
 striped, limestone by cañon
- 13791 Firm 20 ft. Muñoz?
 thickets, base of Sierra
- 13792 *Grevillea*, bush 3 m. fl.!
 white, ~~dark~~^{damp} limestone by cañon
- 13793 Elongated firm, damp
 limestone
- 13794 *Selaginella* upright bluish
 gray, damp limestone by cañon
- 13785 Shrub 2 ft. fl. in
 damp rock by cañon
- 13795 Firm Flores?
 damp rock by cañon
- 13797 Shrub 3 ft. ~~limestone~~
 small stems by side of rock
- 13798 *Psychotria* soft shrub, to 6 ft
 fl. white, fl. black among limestone rocks
- 13799 Shrub 3-5 ft. large tubular fls
 white fragrant. among limestone rocks
- 13800 Firm, of larger form 13793
 damp rock base of cliff
- 13801 Firm damp rocks
 base of cliff
- 13802 Creeping polypodium
 on limestone among rocks
- Aug 21 around and over Sierra de
 Cañegua
- 13803 Shrub 10 ft. freely branched
 in rocks, by arroyo Cruz
- 13804 Firm
- ✓ slender, by arroyo Cruz
- 13805 *Adiantum pinnatum*
 slender by arroyo Cruz

- 13805 ✓ *Ceratostigma pubescens* - 1 in.
 fls 4 in. very dry, ^{scrubby} dry soil
- 13807 ✓ *Acaena laevigata*
 Sedge by arroyo Cruz
- 13808 ✓ *Peperomia glabra* L.
 hairy, pendent from rocks
- 13809 ✓ *Arthropodium*? fern
 face of dry rocks
- 13810 ✓ Bromeliad. rough foliage,
 tips red, on cliff sides
- 13811 ✓ Sumb to 10 ft., fruit 2 in in
 diam, brown, flesh yellow ^{top of cliff}
- 13812 ✓ *Peperomia*, upright, smooth
 light green dry rocks
- 13813 ✓ triangular fern
 high rocks
- 13814 ✓ woody vine, sp. fls blue
 Malpighia? base of ^{rocks} mountain

Aug 24 Suma so. of town
 near Calirula dry rocks

13815 ✓ *Urticaria* herb, base of
 cliff - 3-6 in

13816 ✓ *Forsleya* herb.
 face of high cliff

- 13817 Shrub to 10 ft. fls yellowish
 sleek? dry rocks top of cliff
- 13818 *Tillandsia usneoides* on
 bushes, top of cliff about 6000'
- 13819 Sumb 8 ft. axill. fls whitish
 green rocks top of cliff
- 13820 Polygala? on climbing shrub
 st 12 ft. fls purple top of cliff
- 13821 7 m. to 30 ft. fls black
 trifoliate lvs. top of cliff
- 13822 *Tillandsia*, leaves gray
 brown bushy top of cliff
- 13823 7 m (Talorna) 20 ft. fls
 pink top of cliff
- 13824 *Tillandsia*, " - green
 leaf fls bluish bushes on top of cliff
- 13825 Sumb to 12 ft., freely axill.
 fl red, top of cliff over rocks
- 13826 Sumb to 15 ft. " " " " " " " " " " " " " " " " "
- 13827 "
- 13828 little herb 4 in, base of
 cliff

Aug 26 Savadore & cassia
time of sunra to So Guia

- 13839 *Araliac. Virens* 10 ft. fl.
green outside, white inside. Corolla
lucid, stem glaucous - odor, light
13830 *Ficus* spreading tree 30 ft
fl. yellowish green with black spots
13831 *Sinusas* fern, marginal on
on tree
13832 *Sauvagesia*, 7 m. to 30 ft
fl. green, prof. red. Base of Sierra
13833 Comp. herb, seafg b in fl.
white, purple on midrib, in sinus
13834 Shrub to 8 ft. Rubaceous
✓ side of rocks
13835 Terrestrial orchid, 3-bladed
cavities of rocks high up Sierra
13836 *Asplenium* in damp,
depression among rocks high Sierra
13837 Fern, *Urticariales?* damp
depression among rocks high Sierra
13838 *Peperomia*, stem rounded side
of rock reddish high rock
13839 *Psilotum* ^{high rock}
on base of Palm (Guacal)
13848 Red Gram. Virens 15 ft.
thickets in "ravine"

- 13841 *Succulent. long lipp.*
each standard like straight
13842 *S. sub-5ft. Asaphylo. infl.*
yellowish, slender " " " "
13843 *Peperomia* " " in green
fl. side of rocks in ravine
13844 *Eutimia* from small
Shaded rocks in ravine
13845 *Selaginella* upright? yellowish
in shaded sheltered
13846 *Mutacion*. Shrub 5 ft
mfe white, thicker

Aug 28 Sierra Guayaba

- 13847 *Bromiliad* long green leaves
trif. on tree in valley
13848 Comp. herb 8 ft. fl. white
among rocks base of Sierra
13849 *Piperaea*, cordate leaf -
4-6 ft. - among rocks base of Sierra
13850 Grass somewhat creeping
moist land base of cliff
13851 *Anthurium* on rocks base of
cliff fruit 8 x 1/2 inches red

- 13853 ✓ *Sclerizarella*, upright or
 x pendul. on stalks till base of cliff
- 13852 Grass at base of cliff
- 13854 Euterpe narrow frm
 very well base of cliff
- 13855 Fern at cave, base
 of cliff
- 13856 Fern in cave, base of
 cliff
- 13857 Adiantum glossy
 well, base of cliff
- 13858 Passiflora woody vine
 to 12 ft, fls. yellow-green
 base of cliff
- 13859 Croton? shrub to 4 ft of
 fls. yellowish, fl. green thickish bark
- 13860 Malpighia, shrub, 3 ft.
 fls. pink base of cliff
- 13861 Peristea - to tree 15 ft &
 4 in in diam of trunk old pink
 flowers
- 13862 Harrisia, fls. white not
 fragrant, outer perianth yellowish
 fls. at night of Aug 28 and earlier
 2 weeks previous
- Aug 30. *Surra de Francisco*
 co-Sirna about same as others
 but more wooded - in most
- wood water, 2000 - 7000 m
- 13863 Cyperus tall & branched
 by small arroyo
- 13864 Acalypha - vine to 15 ft, narrow
 brf. over east side of Sirna
- 13865 Spathelio 25 ft in fruit, foliage
 pink-marked white side of Sirna
- 13866 S. hirsute 3 ft, fl. bright red, like
 fls. in 13845. Thick wood base of Sirna
- 13867 Creeping Polypodium
 wood's base of Sirna
- 13868 Smilax, vine to 15 ft, glossy lvs.
 quiet no infl. this the beginning of Sirna
- 13869 Solanum, 6 ft. wood. brf.
 white, quiet base of Sirna
- 13870 Small orchid, simple plant
 only, base of Sirna
- Aug 31 Southward through Sust-
 eaz in & San Carlos to
 Real Paso
- 13871 Shrub to 4 ft, leaves lvs., fl.
 oblong, fls. light blue & fragrant
 with lvs. River at Real Paso

13872 ✓ Small Pilos? 2 in - in
more-litter woods. Carr at
Mol Paseo

Sept 2 Sierra Grancalles.
13873-13874
Valley of Peña Blanca
13875-13876

13873 Shrub 6 ft, fl globular 5 mm
long black shiny thicker in valley

13874 ~~Pithecellobium~~ 10 ft tall
seed black by stream among ~~small~~

13875 Soft shrub 6 ft. comp
fl white by stream, ^{near Peña Blanca} September

13876 Anemone - fm - bank of
stream do do

13877 Adiantum very small
rafters do do

13878 Jaquinia, shrub 6 ft
in orange red fruit small do

13879 Shrub, 8 ft. (wing) fol
small comp do do

13880 Agave? Liana to 6 or 7 ft
wing, thicker near stream
toward Peña Blanca ^{September}

✓ 13881 Vine to 20 ft, fl bright
red, thicker in Peñalre

13882 Cyead to 20 ft. thick
on red clay, head of ravine Peñalre

13883 Polygnum, in ~~poor~~ foot
of Sierra Liruado. ~~do~~ fl pink

13884 Crease vine 10 ft, fl. shiny
blackish, thicker do do

13885 Orchid, creeping stem, lvs
angular. thicker at base do do

Cryptogonum, collected
in Valley of Sierra Liruado

August 1912

13886 Fungus, Polyporus on log

13887 Fungus on wood

13888 Fungus on log

13889 Fungus, on log

13890 Fungus, on log

13891 Fungus, on log

13892 Fungus on wood

- 13893 Fungus, on log
- ✓ 13894 Fungus, on thin ground
 >
- 13895 Fungus, on log
 >
- ✓ 13896 Fungus, on log
- ✓ 13897 Fungus on old wood
- 13898 Fungus, on log
- ✓ 13899 Fungus on old wood
- ✓ 13900 Fungus, on log.
- 13901 Fungus, on log.
- ✓ 13902 Fungus, on log.
- ✓ 13903 Fungus, on the ground
- ✓ 13904 Fungus, Polyporus, on log
- 13905 Fungus on the ground
- 13906 Fungus on old twigs
- ✓ 13907 Fungus on rotten log
- ✓ 13908 Fungus on log
- ✓ 13909 Fungus, on the ground in
 darker thicket
- ✓ 13910 Fungus, on the ground
- ✓ 13911 Fungus, on old wood
- ✓ 13912 Fungus, on ground at base
 of stump
- ✓ 13913 Fungus, rotten wood
- ✓ 13914 Fungus on log.
- ✓ 13915 Fungus on dead twig
- ✓ 13916 Fungus Polyporus on log
- ✓ 13917 Fungus on bud & buds of
 Ritigour (Rubaceous plant)
- ✓ 13918 Moss

1392 ✓ Moss, on western log

13920 Moss, on western log

13921 Moss, on lava rock

13922 Moss, on lava rock

13923 Moss, on soft. rock

13924 Moss, on lava rock

13925. Moss, on western log

13926. Sisrium, on lava rock

13927 Sisrium, on Royal
Palm

13928 Mimulus luteus, fall of
Arroyo Sumideros, western

13929 Algyra on fru. fall of
arroyo Sierra

13930 Lichrostachys nitens, sp.;
ing tree, 15 ft., 1/2 pink & 1/2 green
Roadside, south of Paute de
la Sierra Sept 5th,

13931 Ceratodon purpureus, sp.
- white & reddish over limestone in
field. Portales Sept 5

13932 "Grama"

See specimen of Rose
Sumidero Aug 1912







Conservation work performed
1987-1988. NY State
Conservation/Preservation
Discretionary Grant.

